



05909 U.S. PTO

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**PATENT**

ATTY DOCKET NO.: 5649-1277

DATE: March 16, 2004

**UTILITY PATENT APPLICATION TRANSMITTAL LETTER  
AND FEE TRANSMITTAL FORM (37 CFR § 1.53(b))**



Mail Stop PATENT APPLICATION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith for filing under 37 CFR § 1.53(b) is:

- ☒ a patent application  
☐ a Continuation ☐ a Divisional ☐ a Continuation-in-Part (CIP) Application of prior application no.: \_\_\_\_\_; filed \_\_\_\_\_, the disclosure of which is incorporated herein by reference in its entirety.  
☒ and claims priority to Korean Patent Application Serial No. 10-2003-19258; filed March 27, 2003.

Inventor(s) or Application Identifier:

**Kwang-hee Lee; Cha-young Yoo; Han-jin Lim; Jin-il Lee and Suk-jin Chung**

Entitled: **METHODS OF MANUFACTURING SEMICONDUCTOR DEVICES HAVING A RUTHENIUM LAYER USING VIA ATOMIC LAYER DEPOSITION AND ASSOCIATED APPARATUS AND DEVICES**

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Enclosed are:

1. ☒ Application Transmittal Letter and Fee Transmittal Form (*A duplicate is enclosed for fee processing*)
2. ☒ 14 pages of Specification (including 33 claims)
3. ☒ 4 sheet of Formal Drawings (35 USC 113)
4. ☒ Oath or Declaration
  - a. ☒ newly executed (*original or copy*)
  - b. ☐ copy from prior application (37 CFR 1.63(d) (*for continuation/divisional*) [Note Box 6 Below]
  - c. ☐ **DELETION OF INVENTOR(S)** (*Signed statement deleting inventor(s) named in the prior application*)
5. ☐ Application Data Sheet. See 37 CFR 1.76
6. ☐ Incorporation By Reference (*useable if box 4b is checked*)

The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

7. ☐ Microfiche Computer Program (*Appendix*)
8. ☒ Assignment papers (*cover sheet(s) and document(s)*)
9. ☐ Applicant claims small entity status. See 37 CFR § 1.27.
10. ☒ Information Disclosure Statement, PTO-1449, and 1 reference cited
11. ☒ Preliminary Amendment (*Please enter all claim amendments prior to calculating the filing fee.*)
12. ☐ English Translation Document
13. ☒ Certified Copy of Korean Application No. **10-2003-19258** Filed **March 27, 2003**
14. ☐ Sequence Listing/ Sequence Listing Diskette
  - a. ☐ computer readable copy
  - b. ☐ paper copy
  - c. ☐ statement in support
15. ☐ An Associate Power of Attorney
16. ☒ Return Receipt Postcard (MPEP 503) (*Should be specifically itemized*)
17. ☐ Other:

The fee has been calculated as shown below:

	Column 1 No. Filed	Column 2 No. Extra	Small Entity Rate      Fee	Large Entity Rate      Fee
BASIC FEE			\$375.00	\$ 770.00
TOTAL CLAIMS	33- 20 =	13	x 09 = \$	x 18 = \$234.00
INDEP CLAIMS	5 - 3 =	2	x 44 = \$	x 86 = \$172.00
<input type="checkbox"/> MULTIPLE Dependent Claims Presented			+ 140 = \$	+ 280 = \$
<i>If the difference in Col. 1 is less than zero, Enter "0" in Col. 2</i>			Total \$	Total \$1,176.00

- ☐ A check in the amount of \$ to cover the filing fee is enclosed.
- ☒ A check in the amount of **1,176.00** is enclosed to cover the filing fee and a check in the amount of **\$40.00** to cover the Assignment Recordation fee is enclosed.
- ☐ Please charge my Deposit Account No. 50-0220 in the amount of (filing fee plus \$40.00 to cover Assignment Recordation).
- ☒ The Commissioner is hereby authorized to credit overpayments or charge the following fees associated with this communication to Deposit Account No. 50-0220:
- a. ☒ Additional filing fees under 37 CFR 1.16 for presentation of extra claims.
  - b. ☒ Additional patent application processing fees under 37 CFR 1.17.

Respectfully submitted,



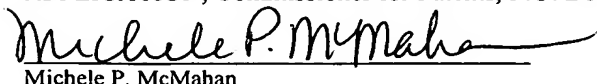
D. Randal Ayers  
Registration No. 40,493

#### CERTIFICATE OF EXPRESS MAILING

Express Mail Label No. EV 381444019US

Date of Deposit: March 16, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR § 1.10 on the date indicated above and is addressed to: Mail Stop PATENT APPLICATION, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Michele P. McMahan